

COMPOSITE NEGATIVE ELECTRODE AND SECONDARY BATTERY USING IT

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- international: H01M4/02; H01M10/40; H01M4/02; H01M10/36; (IPC1-7): H01M4/02; H01M10/40

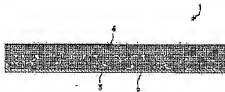
- European:

Application number: JP19980348994 19981208

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Abstract of JP 2000173595 (A)

PROBLEM TO BE SOLVED: To provide a battery having high energy density, long cycle life, and safety by providing a current collector composed of a porous body implementing such reaction as depositing and/or dissolving alkali metal and a solid electrolyte whose movable ion in a solid is only alkali metal ion and by impregnating and integrating with at least a part of the solid electrolyte into the porous body. **SOLUTION:** A composite negative electrode 1 which is for a lithium secondary battery is provided with a metal foil 2 composed of metal lithium foil, etc., and a solid electrolyte 4 arranged on a porous current collector 3 arranged on a major face of the metal foil 2 and compositely integrated with the current collector 3. The porous material for implementing such reaction as depositing and/or dissolving the metal lithium is used for the current collector 3. Nickel foam, etc., are used as the porous current collector 3. Those whose movable ion in the solid is substantially only lithium ion are used for the solid electrolyte 4 and at least a part of the solid electrolyte 4 is impregnated in the current collector 3.



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